

IN THE CLAIMS

Please cancel Claims 2, 8, and 11 without prejudice or disclaimer of the subject matter thereof.

Please amend claims 1, 3-4, 7, 9-10, and 12-13 as follows:

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1. (Currently Amended) An isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a protein having an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:64 and SEQ ID NO:65, and variants thereof that are at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:64 and SEQ ID NO:65, wherein said protein has ecdysone receptor activity selected from the group consisting of: (a) a nucleic acid molecule having at least about 34 nucleotides wherein said nucleic acid molecule hybridizes with a nucleic acid sequence selected from the group consisting of SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:38, and SEQ ID NO:39; and (b) a nucleic acid molecule having at least about 30 nucleotides wherein said nucleic acid molecule hybridizes with a nucleic acid sequence selected from the group consisting of SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, and SEQ ID NO:43, wherein said nucleic acid molecule of (a) or (b) hybridizes under conditions comprising (i) hybridizing in a solution comprising 2X SSC and 0% formamide at a temperature of 37°C and (ii) washing in a solution comprising 1X SSC and 0% formamide at a temperature of 52°C.

2. (Canceled)

3. (Currently Amended) The nucleic acid molecule of Claim 1, wherein said nucleic acid molecule is selected from the group consisting of: (a) a nucleic acid molecule comprising ~~comprises~~ a nucleic acid sequence selected from the group consisting of SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:8, and ~~SEQ ID NO:10, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:38, and SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, and SEQ ID NO:43;~~ and (b) a nucleic acid molecule comprising an allelic variant of a nucleic acid sequence of (a).

4. (Currently Amended) The nucleic acid molecule of Claim 1, wherein said nucleic acid molecule ~~is selected from the group consisting of: a nucleic acid molecule comprising a nucleic acid sequence encoding~~ encodes a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NO:6, ~~SEQ ID NO:14, SEQ ID NO:27, SEQ ID NO:33, SEQ ID NO:64, and SEQ ID NO:65; SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, and SEQ ID NO:71;~~ and a nucleic acid molecule comprising an allelic variant of a nucleic acid molecule encoding a protein having any of said amino acid sequences.

5. (Original) A recombinant molecule comprising a nucleic acid molecule as set forth in Claim 1 operatively linked to a transcription control sequence.

6. (Original) A recombinant cell comprising a nucleic acid molecule as set forth in Claim 1.

31 7. (Currently Amended) A method to produce a protein, said method comprising (a) culturing a cell transformed with an isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a protein having an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:64 and SEQ ID NO:65, and variants thereof that are at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:64 and SEQ ID NO:65, wherein said protein has ecdysone receptor activity; and (b) recovering the expressed protein ~~a nucleic acid molecule selected from the group consisting of: (a) a nucleic acid molecule having at least about 34 nucleotides wherein said nucleic acid molecule hybridizes with a nucleic acid sequence selected from the group consisting of SEQ ID NO:7, SEQ ID NO:10, SEQ ID NO:15, SEQ ID NO:18, and SEQ ID NO:39; and (b) a nucleic acid molecule having at least about 30 nucleotides wherein said nucleic acid molecule hybridizes with a nucleic acid sequence selected from the group consisting of SEQ ID NO:28, SEQ ID NO:31, SEQ ID NO:34, SEQ ID NO:37, SEQ ID NO:41 and SEQ ID NO:43, wherein said nucleic acid molecule of (a) or (b) hybridizes under conditions comprising (i) hybridizing in a solution comprising 2X SSC and 0% formamide at a temperature of 37°C and (ii) washing in a solution comprising 1X SSC and 0% formamide at a temperature of 52°C.~~

8. (Canceled)

9. (Currently Amended) The method of Claim 7, wherein said protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, ~~SEQ ID NO:14, SEQ ID NO:27, SEQ ID NO:33, SEQ ID NO:64, and SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, and SEQ ID NO:71,~~ and an amino acid sequence encoded by a nucleic acid molecule comprising an ~~allelic variant of a nucleic acid molecule encoding any of said amino acid sequences.~~

B1 10. (Currently Amended) A composition comprising an excipient and an isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a protein having an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:64 and SEQ ID NO:65, and variants thereof that are at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:64 and SEQ ID NO:65, wherein said protein has oxydase receptor activity selected from the group consisting of: (a) a nucleic acid molecule having at least about 34 nucleotides wherein said nucleic acid molecule hybridizes with a nucleic acid sequence selected from the group consisting of ~~SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:38, and SEQ ID NO:39;~~ and (b) a nucleic acid molecule having at least about 30 nucleotides wherein said nucleic acid molecule hybridizes with a nucleic acid sequence selected from the group consisting of ~~SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, and SEQ ID NO:43,~~ wherein said nucleic

~~acid molecule of (a) or (b) hybridizes under conditions comprising (i) hybridizing in a solution comprising 2X SSC and 0% formamide at a temperature of 37°C and (ii) washing in a solution comprising 1X SSC and 0% formamide at a temperature of 52°C.~~

11. (Canceled)

12. (Currently Amended) The composition of Claim 10, wherein said nucleic acid molecule is selected from the group consisting of: ~~(a) a nucleic acid molecule comprising~~ comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:10, ~~SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, and SEQ ID NO:43; and (b) a nucleic acid molecule comprising an allelic variant of a nucleic acid sequence of (a).~~

13. (Currently Amended) The composition of Claim 10, wherein said nucleic acid molecule is selected from the group consisting of: ~~a nucleic acid molecule comprising a nucleic acid sequence encoding~~ encodes a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NO:6, ~~SEQ ID NO:14, SEQ ID NO:27, SEQ ID NO:33, SEQ ID NO:64, and SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, and SEQ ID NO:71; and a nucleic acid~~

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~~molecule comprising an allelic variant of a nucleic acid molecule encoding a protein
having any of said amino acid sequences.~~
